

201108 Hurricane Irene Data Sources

Geospatial Information and Remotely Sensed Imagery Products

August 30, 2011

Hazards Data Distribution System (HDDS)

<http://hdds.usgs.gov/hdds2/>

Select Event: "201108_Hurricane_Irene" → click on "+" and then "Search"

HDDS Rest Services: <http://hdds.usgs.gov/ArcGIS/rest/services>

- under 201108_Hurricane_Irene
- WMS layer Aerial NOAA imagery available (08/28/11) **NEW**

Emergency Operations Portal GIS Resources

<http://edclxs5.cr.usgs.gov/EO/gis.php> **NEW**

HDDS

Docs_Misc

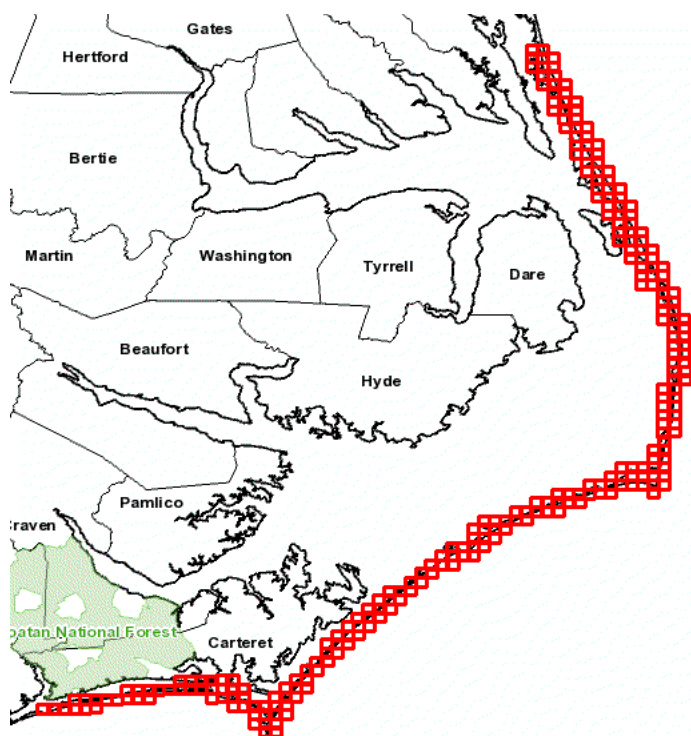
http://hdds.usgs.gov/hdds2/disaster_restricted/201108_Hurricane_Irene/docs_misc/

FEMA surge sensors **NEW**

RSWG meeting notes **NEW**

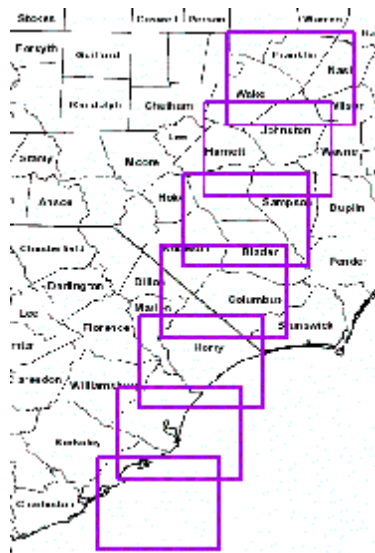
NOAA Acquired: August 28, 2011 **NEW**

http://edcftp.cr.usgs.gov/pub/data/disaster/201108_Hurricane_Irene/data/AERIAL_NOAA/

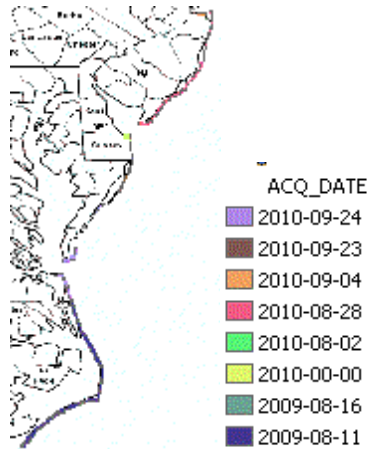


ASTER Acquired: August 28, 2011

http://edcftp.cr.usgs.gov/pub/data/disaster/201108_Hurricane_Irene/data/TERRA_ASTER_NASA/

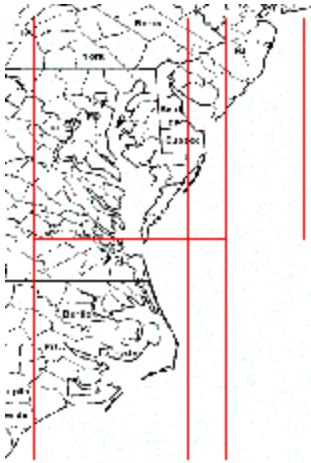


Pre-Event USACE Lidar



USGS Pre-Event NED

http://edcftp.cr.usgs.gov/pub/data/disaster/201108_Hurricane_Irene/data/AERIAL_USACE_LIDAR/



Virginia Pre-Event from HDDS

[BL_VA_2002_virginia_va_2ft/](#)

[BL_VA_200512_coastal_va_0x5000m/](#)

[BL_VA_200906_virginia_naip_va_1m/](#)

Pre-Event NAIP Imagery from HDDS

[BL_CT_201008_connecticut_naip_ct_1m/](#)

[BL_DC_201004_washington_dc_16cm/](#)

[BL_DE_200906_delaware_naip_de_1m/](#)

[BL_MA_201007_massachusetts_naip_ma_1m/](#)

[BL_MD_200906_maryland_naip_md_1m/](#)

[BL_NC_201006_north_carolina_naip_nc_1m/](#)

[BL_NJ_201007_new_jersey_naip_nj_1m/](#)

[BL_NY_200905_new_york_naip_ny_1m/](#)

[BL_PA_201005_pennsylvania_naip_pa_1m/](#)

[BL_RI_201007_rhode_island_naip_ri_1m/](#)

HDDS Restricted

For Access Contact: Rynn Lamb lamb@usgs.gov or Brenda Jones bkjones@usgs.gov

SATELLITE/NON_INGESTED/GEOEYE_TERRASARX

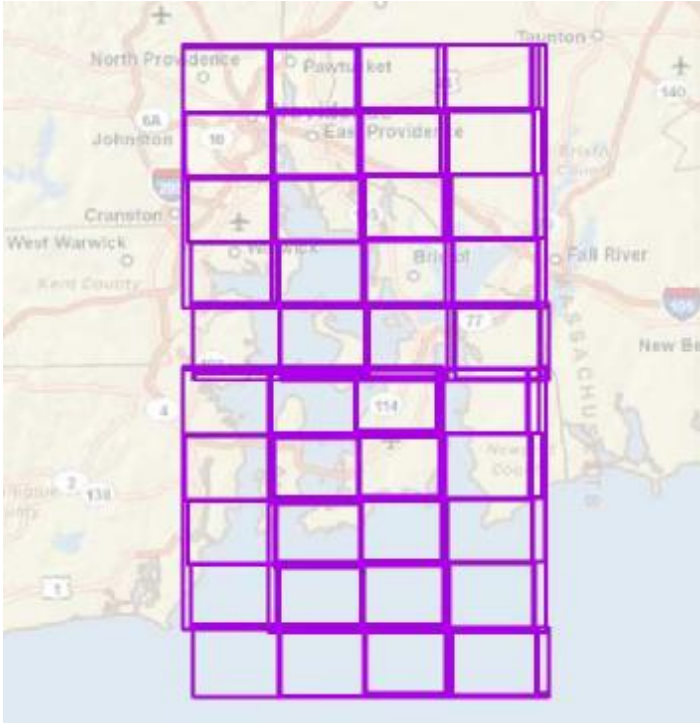
3 images (Puerto Rico 08/27/11) **NEW**

SATELLITE/NON_INGESTED/RADARSAT

7 images (09/13/08, 08/29/11) **NEW**

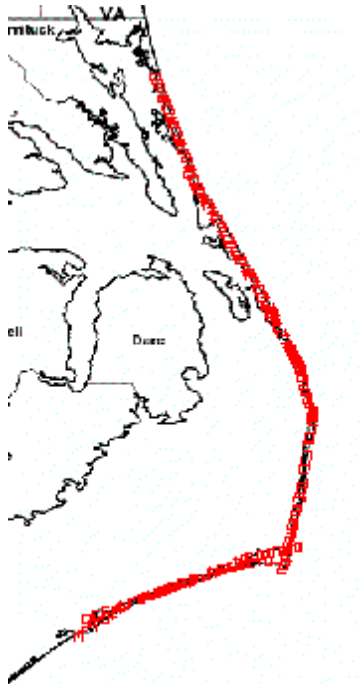
GEOEYE Acquired: August 29, 2011 **NEW**

http://edcftp.cr.usgs.gov/disaster_restricted/201108_Hurricane_Irene/data/GEOEYE_NGA/



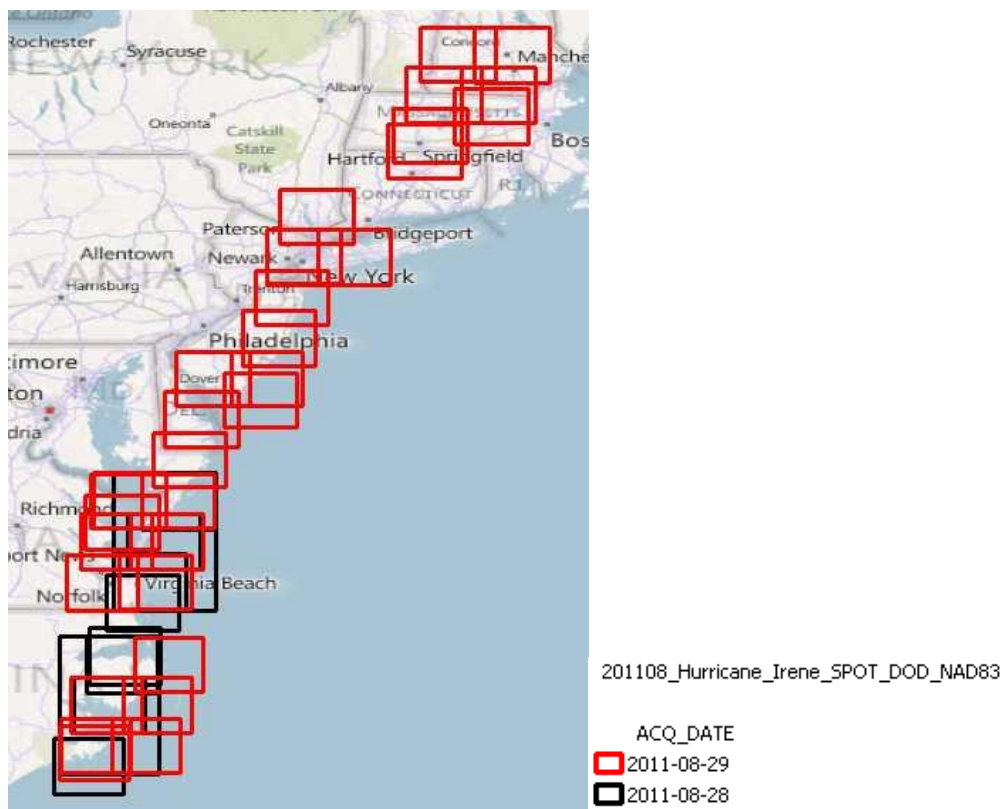
NC NCDOT Acquired: August 28, 2011 **NEW**

http://edcftp.cr.usgs.gov/disaster_restricted/201108_Hurricane_Irene/data/AERIAL_NCDOT/



SPOT Acquired: August 28, 2011 **NEW**

http://edcftp.cr.usgs.gov/disaster_restricted/201108_Hurricane_Irene/data/SPOT_DOD/



Licensed Imagery will be posted here.

Pre-Event WorldView:

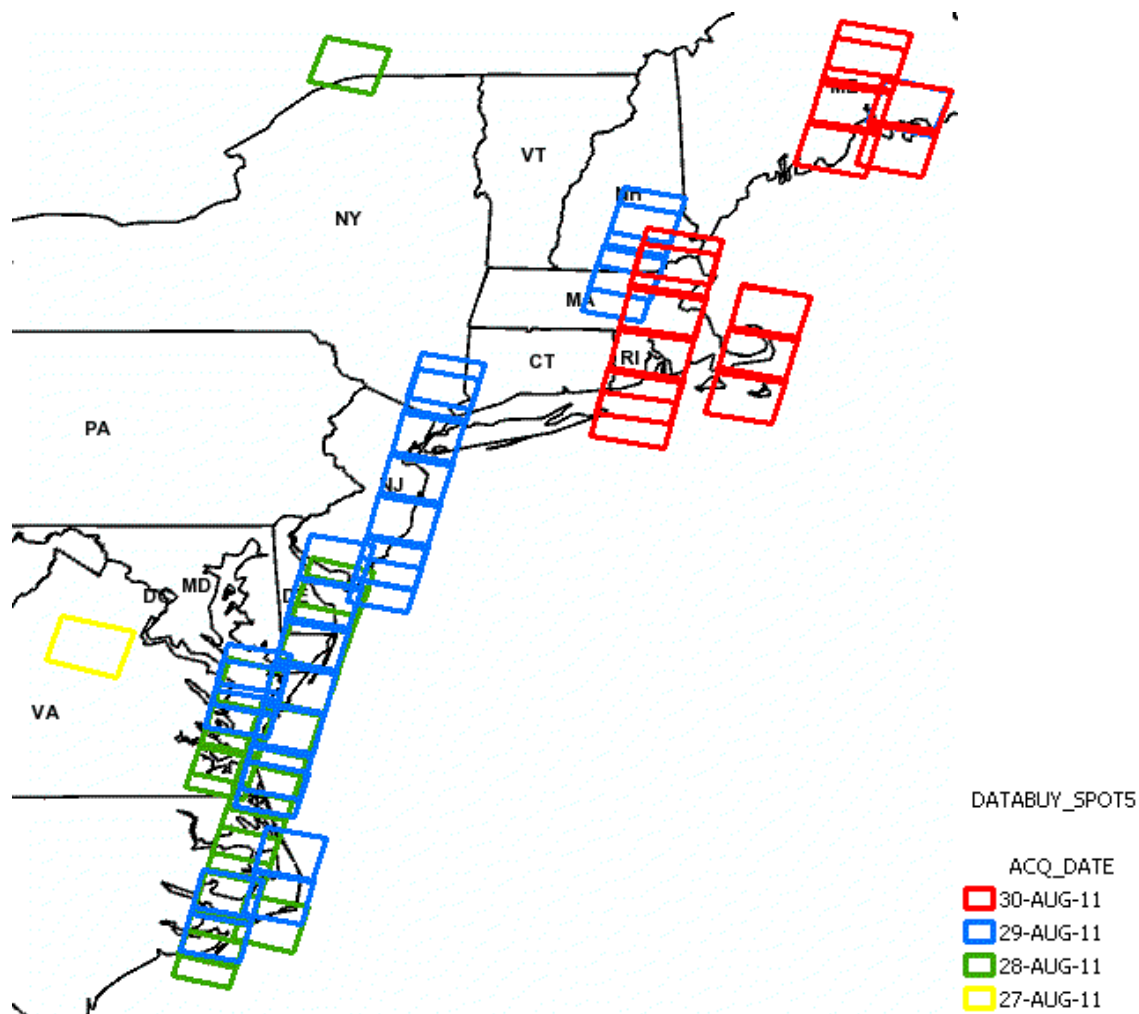
http://edcftp.cr.usgs.gov/disaster_restricted/201108_Hurricane_Irene/data/WORLDVIEW_NGA/

END HDDS

Spot-5 Data Buy

<http://edcsns17.cr.usgs.gov/NewEarthExplorer/> **NEW**

You must register to see the SPOT-5 imagery.



Pictometry Pre and Post Irene Aerial Oblique Photography

Pictometry Online (POL) is offering free access for all Federal agencies to Pre and FEMA initiated Post Irene aerial photography.

For Username and Password, contact:

NANCY BRELOS

Director, Federal Sales Civilian Agencies

Pictometry International, Inc.

Northern Virginia Office

(703) 581-9059

nancy.brelos@pictometry.com

FEMA

Wind Field for North Carolina

The first part of the Irene data can be found in the following link;

<ftp://ftp.aoml.noaa.gov/hrd/pub/annane/irene/NC>

The folder contains wind swaths in pdf and shapefile format centered in the NC area. Also you will find 3 census data files in different units.

RSS and Data

<http://www.fema.gov/help/rss.shtm>

FEMA_GIS

FEMA_GIS public group has been established on www.arcgis.com and several public web services have been registered on the site:

- DRC's
- Declared Counties
- Regions/Offices
- Hurricane Evacuation Routes

Planned:

- Historic Designations

NASA

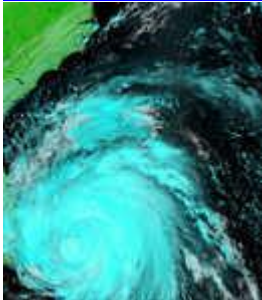
MODIS Rapid Response:

Select Terra or Aqua 721 @ 250meters For further exploitation use "Download JPG image with ancillary files (.zip)"

<http://lance-modis.eosdis.nasa.gov/imagery/subsets/?project=fas&subset=USA4>



<http://lance-modis.eosdis.nasa.gov/imagery/subsets/?project=fas&subset=USA8>



MODIS flood mapping at NASA Goddard Space Flight Center:

<http://oas.gsfc.nasa.gov/floodmap/globalMap.htm> This is the home page where you can navigate the map to specific regions. The MODIS flood mapping algorithm requires cloud

free pixels to make a flood assessment. So it will have to wait until the hurricane moves out of the area.

Regional links with .png and shapefiles

Mid-Atlantic:

<http://oas.gsfc.nasa.gov/floodmap/getTile.php?location=080W040N>

New York / New England:

<http://oas.gsfc.nasa.gov/floodmap/getTile.php?location=080W050N>

Two very preliminary MODIS-based maps of the Irene flooding for the northeastern US are online at

<http://floodobservatory.colorado.edu/RapidResponse/2011UnionvilleNYRR.html> **NEW**

and

<http://floodobservatory.colorado.edu/RapidResponse/2011CTValleyRR.html> **NEW**

NASA TRMM rainfall products

<http://trmm.gsfc.nasa.gov/>

NGA

Volumes 1 - 7 of the New York/New Jersey Area Urban Search and Rescue 1k Atlas are now available on the eFTP. (<http://www.floodmaps.net/eftp/download.php>) File names:

717266845_NY_NJ_1k_USAR_Atlas_Vol_1.pdf
768655395_NY_NJ_1k_USAR_Atlas_Vol_2.pdf
864675903_NY_NJ_1k_USAR_Atlas_Vol_3.pdf
774285888_NY_NJ_1k_USAR_Atlas_Vol_4.pdf
827624511_NY_NJ_1k_USAR_Atlas_Vol_5.pdf
323489379_NY_NJ_1k_USAR_Atlas_Vol_6.pdf
242080688_NY_NJ_1k_USAR_Atlas_Vol_7.pdf

Files are also available on SMTS:

NY_NJ 1k USAR Atlas Vol 1.pdf
NY_NJ 1k USAR Atlas Vol 2.pdf
NY_NJ 1k USAR Atlas Vol 3.pdf
NY_NJ 1k USAR Atlas Vol 4.pdf
NY_NJ 1k USAR Atlas Vol 5.pdf
NY_NJ 1k USAR Atlas Vol 6.pdf
NY_NJ 1k USAR Atlas Vol 7.pdf

USGS

USGS: Coastal Change Hazards: Hurricanes and Extreme Storms

<http://coastal.er.usgs.gov/hurricanes/irene/coastal-change/updated-assessment.php>

USGS Storm surge Sensor Deployment WEB viewer

http://water.usgs.gov/osw/floods/2011_HIrene/index.html

Click on the map and you will go directly to the viewer.

International Charter for Disasters

International Charter was activated yesterday, and the following collections being offered through the Intl Charter (to specified end users only. Project Manager (Sandi Cone, charterirene2011@gmail.com).

Potential International Charter collects:

RSAT1 - Aug 28

RSAT2 - Aug 28, 29

ESA Envisat - 27 Aug (Chesapeake Bay, NC, SC)



30 Aug (Cape Cod, Long Island, Outer Banks)

DLR TerraSAR-X - 28 Aug (NY, Philly);

31 Aug (NC Coast, VA, Wash DC);

31 Aug (RI and Boston)

DMCii sensors (30m EO, large footprint) -- archive + new acquisitions (Aug 29 & Sep 2)

Naval Research Lab

<http://www.nrlmry.navy.mil/TC.html>

SSMI, TMI, AMSRE, WINDSAT, AMSUB, GAC, GEO, MODIS, OLS

Tropical Cyclone Web Page

http://www.nrlmry.navy.mil/tc_pages/tc_home.html

GOES Tropics

<http://www.nrlmry.navy.mil/tropics-bin/tropics.cgi>

NOAA

Measured Surge: <http://tidesandcurrents.noaa.gov/quicklook/data/IRENE.html>

Irene: http://www.noaawatch.gov/2011/tc_at09.php

National Hurricane Center: <http://www.nhc.noaa.gov/>

NHC GIS Data and Products <http://www.nhc.noaa.gov/gis/>

Weather: <http://weather.gov>

Latest Storm Surge Predictive Files <http://www.weather.gov/mdl/psurge/download.php>

Storm Surge Probabilities http://www.nhc.noaa.gov/psurgegraphics_at4.shtml?gm

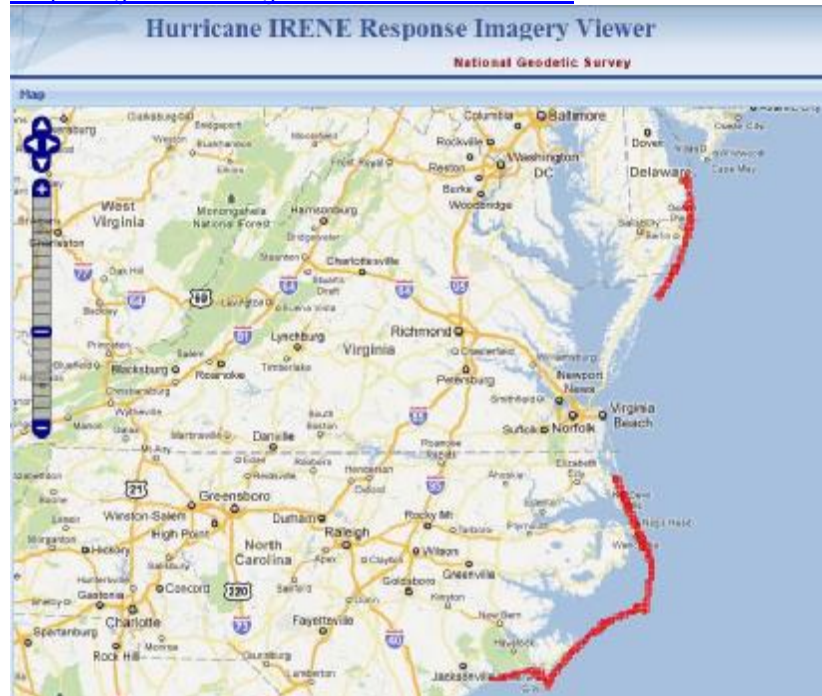
Google Map Viewer: http://www.nhc.noaa.gov/psurgegraphics_at1.shtml?gm

Hurricane IRENE Response Imagery Viewer:

Single tiles and zip files: <http://ngs.woc.noaa.gov/storms/irene/>

TMS tiles.

<http://ngs.woc.noaa.gov/storms/irene/mobile>



Hurricanes @ USA.gov Links to state information

<http://www.usa.gov/Topics/Weather/Hurricane.shtml>

info4disasters.org: an encyclopedia & community forum

<http://info4disasters.org/hurricane-eoc/irene/> **Power Outage Maps**

CrisisCommons

http://wiki.crisiscommons.org/wiki/Hurricane_Irene

http://wiki.crisiscommons.org/wiki/Hurricane_Irene_Data_Profile

USDA Pre-Event Imagery

USDA NAIP WMS: By State

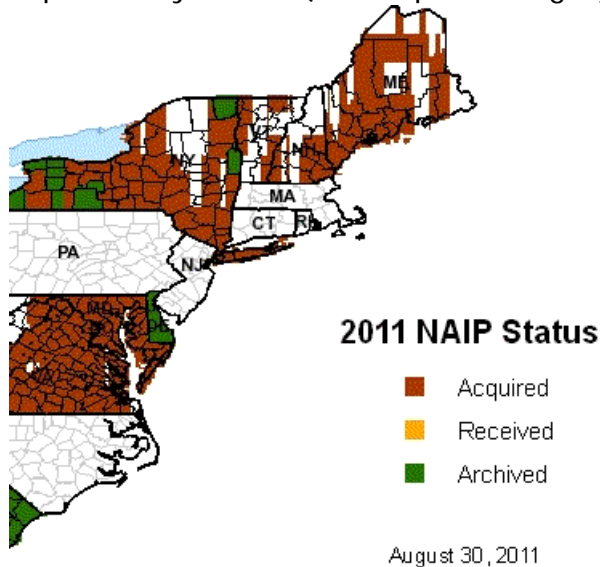
NAIP ArcGIS Map Service by State : <http://gis.apfo.usda.gov/ArcGIS/services>

Pre-Event 1-meter NAIP Imagery from 2011 available for: SC

Pre-Event 1-meter NAIP Imagery from 2010 available for: CF, NJ, RI, VA

Pre-Event 1-meter NAIP Imagery from 2009 available for: DE, MD, NY
USDA NAIP Imagery on Geospatial Data Gateway: By County
<http://datagateway.nrcs.usda.gov/>

USDA/FSA has requested that the NAIP vendors expedite delivery for imagery impacted by Irene. (see map for imagery acquired but not received) **NEW**



General GIS Data:

USGS Seamless Data Distribution System
National Elevation Data Set, 1-meter DOQs and Other National Data
<http://seamless.usgs.gov/>

Data Sources & Web Mapping Applications
http://sierrafire.cr.usgs.gov/fire_gis_webpage.htm

OGC compliant WMS Servers
http://www.skylab-mobilesystems.com/en/wms_serverlist.html

State GIS Sites:

Connecticut <http://mapserver.lib.uconn.edu/data/index.htm>

Maine <http://www.maine.gov/megis/>

Maryland <http://dnrweb.dnr.state.md.us/gis/data/data.asp>

MEMA OSPREY <http://www.mema.state.md.us/MEMA/MAP.html>

Massachusetts <http://www.mass.gov/mgis/>

New Hampshire <http://www.granit.unh.edu/>

New Jersey https://njgin.state.nj.us/NJ_NJGINExplorer/index.jsp

New York <http://www.nysgis.state.ny.us/> <http://www.nysgis.state.ny.us/index.cfm>

North Carolina <http://www.nconemap.net/>

2010 Orthoimagery Rest Services:

http://imagery.nconemap.com/ArcGIS/rest/services/2010_Orthoimagery/ImageServer

Rhode Island <http://www.edc.uri.edu/rigis/>

Vermont www.vcqi.org This site is down due to flooding.

<http://www.uvm.edu/~joneildu/downloads/VCGI/>

The two zip files in this directory contain data from the Vermont Center for Geographic Information. The data are posted here to fill the gap while VCGI recovers from flooding stemming from Hurricane Irene.

Virginia <http://www.virginiaplaces.org/boundaries/qisdata.html>

Virginia ArcGIS Service:

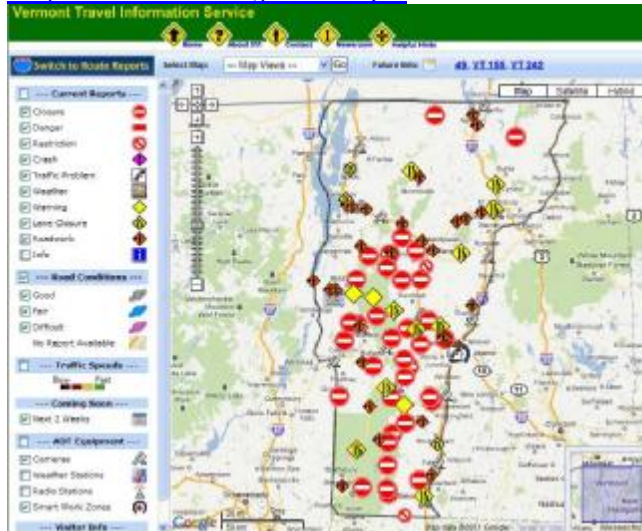
Most Recent Imagery (2009/2007/2006) web service available without authentication. We are also in the process of building a web service for the 2011 imagery we have for the NGA1 (Virginia Beach – Hampton Urban Area), which will be available in the same location.

The ArcGIS Server URL is <http://gismaps.virginia.gov/arcgis2/services>

The web services you would want are in the MostRecentImagery folder.

Vermont Road Closures **NEW**

<http://511.vermont.gov/main.jsf>



Other Resources:

Delta State Atlases (geopdf mapbooks)

http://mississippi.deltastate.edu/data/USNG_Atlases/

<http://greatriver.deltastate.edu/IreneUSNG/index.html> - Flex viewer

U.S. Government Information Sharing Sites (**Restricted Access**):

HSIN <http://www.hsin.gov>

Emergency Management: Hurricane Irene

<https://government.hsin.gov/sites/EmergencyManagement/SysSupport.aspx>

Federal Operations: Hurricane Irene

<https://government.hsin.gov/sites/FedOperations/DocMgmt.aspx>

IRSCC Daily Report

<https://government.hsin.gov/sites/EmergencyManagement/IRSCC/default.aspx>

IRSCC Geospatial Data Viewer

<https://government.hsin.gov/sites/EmergencyManagement/IRSCC/SitAware.aspx>

To request access to the IRSCC Portal, please contact the IRSCC Executive Secretariat at irsc-execsec@hq.dhs.gov

Intelink-U

Damage, Debris, and Flooding Shapefiles

https://www.intelink.gov/wiki/Hurricane_Irene_2011

Maps Under DMIGS; IRSCC reports

<https://www.intelink.gov/inteldocs/browse.php?ffFolderId=263031>

NGA Source Americas/Hurricane-Tropical Storm Situational Report (Imagery Tasking) **NEW**

https://www.intelink.gov/wiki/NGA_Source_Americas/Hurricane-Tropical_Storm_Situational_Report

Civil Air Patrol

<https://missions.cap.af.mil/wmirs>

Planned Acquisitions:

NOAA

NOAA plans on acquiring RGB imagery and topographic LIDAR which is the basically the outer coast from Beaufort, NC to Cape Henry, VA.

The LIDAR specifications for point cloud:

- LAS 1.2 format
- Horizontal: UTM in the appropriate zone, NAD83 meters
- Vertical: NAD83 Ellipsoid meters
- at least 1 meter resolution (likely 2-3 points per sq meter)

The first product will have all returns classified as 1- Default, Unclassified. We will most likely tile these into 2.5 X 2.5 km tiles. Accuracies will be dependent on base station baselines. If all goes well, we should be able to give a first look with something in the ballpark of 20-30 cm vertical. The refined product would be in the 15 cm realm.

RGB imagery will be available:

http://storms.ngs.noaa.gov/eri_page/index.html and HDDS

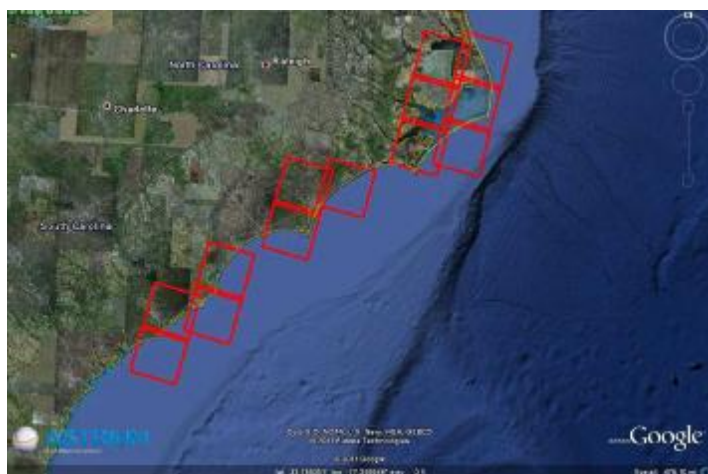
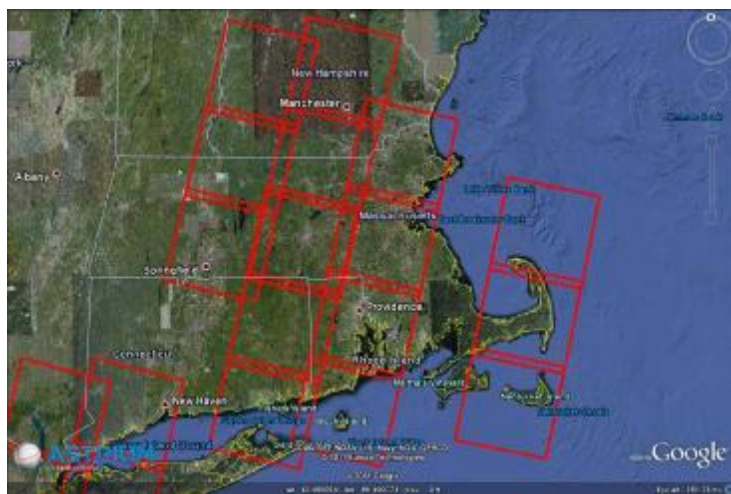
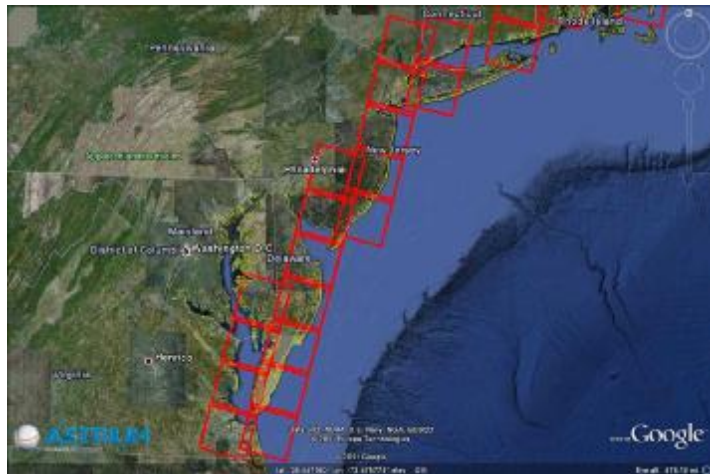
North Carolina

NCDOT plans to acquire imagery along the barrier islands from Ocracoke to Duck

Contact: Johnston, Keith R <kjohnston@ncdot.gov>

SPOT / Astrium / Downloaded and Processed by EagleVision

EagleVision pushes the data to HDDS for distribution as soon as they are processed. Users will need to register for access.



Our first collection will take place on Sunday with SPOT5 (5m PAN, 10m MSI) of Norfolk, the Outer Banks and some key areas south of that AOI.

Monday we intend SPOT5 to collect much of the East Coast and Western Massachusetts.

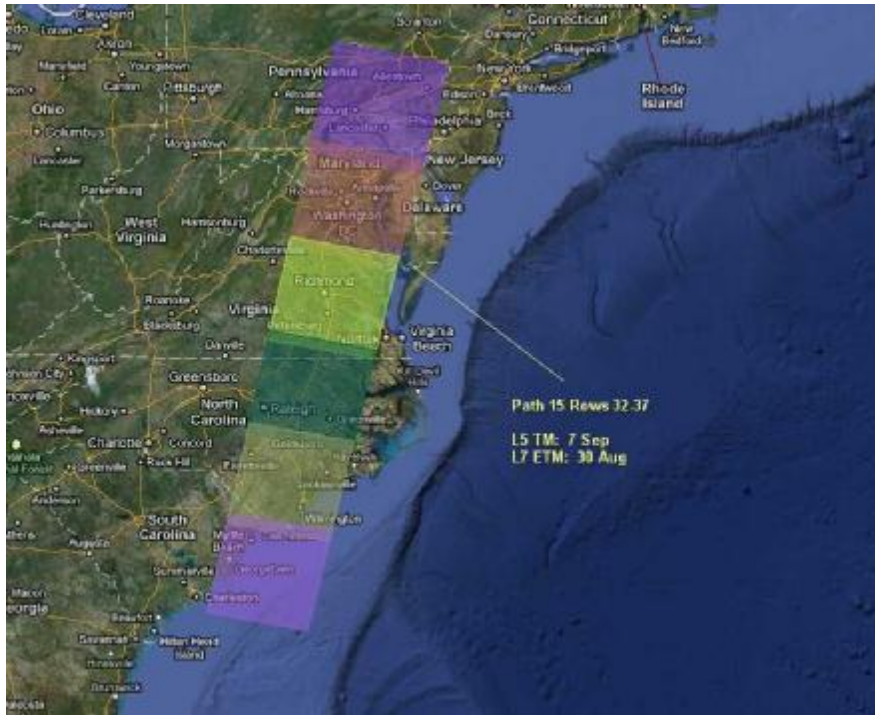
Tuesday SPOT5 will only be able to image the eastern most portion of Massachusetts.

SPOT4 will be tasked to collect MSI when its orbit approaches the east coast on Wednesday.

Landsat

Graphics for Landsat are below. As soon as acquired, the imagery will be loaded to HDDS.





Products and Resources from Federal/State/Local/Private:

8/25/2011

FEMA

IMAT White Team Geospatial Unit

Location: VA EOC (Richmond)

POC: Eric Soucie (eric.soucie@dhs.gov)

Region X Support to Region III

Location: MEMA (Reisterstown, MD)

POC: John Edwards (john.edwards2@dhs.gov)

HIFLD Working Group

HSIP Gold/Freedom (Presidentially Declared Disaster)

www.hifldwg.org

POC: Jason Barnett (Barnett_jason@bah.com)

DHS

Critical Infrastructure/Key Resources (CIKR) Maps

Joe Ricks (joe.ricks@dhs.gov) (Richmond PSA)
Mark Milicich (mark.milicich@dhs.gov) (Norfolk PSA)
Matt Wombacher (matthew.wombacher@hq.dhs.gov) (National Capital Region PSA)
Sean Mcaraw (sean.mcaraw@dhs.gov) (National Capital Region PSA)
Ray Hanna (raymond.a.hanna@hq.dhs.gov) (Maryland PSA)
Ken Greeson (ken.greeson@hq.dhs.gov) (Delaware PSA)

Folks here is a resource list as compiled from our RI SG GIS Pre Event Call. We will try to update this list after each call. Big thanks to Jason Barnett for compiling this list from his notes.

Virginia

Virginia Dept. of Emergency Management (VDEM):

POC: eocgis@vdem.virginia.gov

Storm Surge Road Maps (CAT 1-4) by county

Currently Identifying Hazards data: Wind, Rain, Storm Surge then will assess risk.

County of Fairfax

POC: Mike Liddle (Michael.Liddle@fairfaxcounty.gov)

Dam Inundation Maps

County of Henrico

POC: Juston Manville (man86@co.henrico.va.us)

Web Mapping Application (Web Services available?)

Maryland

POC: Mick Brierly (mbrierley@mema.state.md.us)

MEMA OSPREY <http://www.mema.state.md.us/MEMA/MAP.html>

Pushing hurricane specific data to our publicly facing OSPREY application on MEMA website.

City of Laurel

Laurel Flex Application

POC: Sandi Cone (scone@laurel.md.us)

Send comments, additions, and corrections to:
Glenn Bethel, USDA Remote Sensing Advisor
glenn.bethel@usda.gov (202)720-1280